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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of STROBEL, et al.

Application No.: 10/632,083

Filed: July 31, 2003

Title: ACYLATED, HETEROARYL-CONDENSED CYCLOALKENYLAMINES AND THEIR USE

**AS PHARMACEUTICALS** 

Examiner: Powers, F.

Art Unit: 1626

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June / \, 2005

Paul Irvine

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Applicants submit herewith patents, publications, and other information of which they are aware, which they believe may be material, as defined in 37 C.F.R. 1.56(b), to the examination of this application and in respect of which there may be a duty to disclose in accordance with 37 C.F.R. 1.56(a). While the information referred to in this Information Disclosure Statement may be material pursuant to 37 C.F.R. 1.56(b), the filing of this Information Disclosure Statement is not intended to, pursuant to 37 C.F.R. 1.97(h), constitute an admission that any patent, publication or other information referred to is, or is considered to be, material to the patentability of this invention. Pursuant to 37 C.F.R. 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information exists.

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Respectfully submitted,

Joseph D. Rossi, Reg. No. 47,038

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Aventis Docket No. DEAV2002/0057 US NP

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## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Complete if Known							
Application Number	10/632,083						
Filing Date	07-31-2003						
First Named Inventor	STROBEL						
Group Art Unit	1626						
Examiner Name	Powers, F.						
Attorney Docket Number	DEAV2002/0057 - US - NP						

				U.S. PATENT DOCU	JMENTS	
Examiner Initials*	Cite No.1	U.S. Patent D	Ocument Kind Code <sup>2</sup> (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		20030055093		STROBEL	03-20-2003	
		20030022935		STROBEL	01-30-2003	
		20040225013		STROBEL	11-11-2004	
		20030055087		SHINKAI, et al.	03-20-2003	
		20040142976		KAWAI, et al.	07-22-2004	
		5,527,815		TOMIYAMA, et al.	06-18-1996	
		5,753,662		PEGLION, et al.	05-19-1998	
		6,048,880		KAWAI, et al.	04-11-2000	
		6,258,829		TAKAHASHI, et al.	07-10-2001	
		6,278,027		TOMIYAMA, et al.	08-21-2001	
		6,410,561		SHINKAI, et al.	06-25-2002	-
		6,696,470		KAWAI, et al.	02-24-2004	
		6,759,412		STROBEL	07-06-2004	
		6,617,359		STROBEL	09-09-2003	
		6,812,253		STROBEL	11-02-2004	
		20050054729		STROBEL	03-10-2005	
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				FOR	EIGN PATENT DOCUMEN	rs		
Examiner Initials*	Cite No.1	Office:	Foreign Patent Do  Number4	cument Kind Code <sup>5</sup> (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T6
		CA	2,151,443		TOMIYAMA, et al.	06-09-1995		
		wo	00/03746		LIAO	01-27-2000		
	WO 01/68652			ANDERSON, et al.	09-20-2001		floor	
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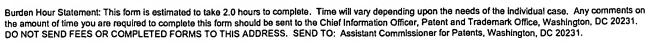
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				Application Number	10/632,083	
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STA	TEMENT	RY	APPLICANT	First Named Inventor	STROBEL	
017		<b>-</b>	Al I LIO/III	Group Art Unit	1626	
	(use as many	sheets	as necessary)	Examiner Name	Powers, F.	
Sheet	2	of	4	Attorney Docket Number	DEAV2002/0057 - US - NP	

		Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the	
xaminer nitials	Cite No. <sup>1</sup>	item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	Т
		BIANCHI, et al., Regioselectivity in the Reactions of Benzonitrile N-Phenyl-Imide and Some Benzonitrile N-Oxides with a,B-Unsaturated Ketones., J. Chem. Res, Synop. (1981) 6-7	
		BINDER, et al., A Facile Route to Functionalized Cyclopenta [b] thiophenones Based on the Structure of the Selective COX-2 Inhibitor Flosulide, Monatsh. Chem 129, (1998), 887-896	
		CAPRATHE, et al., Dopamine Autoreceptor Agonists as Potential Antipsychotics. 3. 1 6-Propyl-4,5,5a,6,7,8-hexahydrothiazolo [4,5-f] quinolin-2-amine, J. Med. Chem. 34, (1991), 2736-2746	
-		DAMMERTZ, et al., Synthese Von 6,7,8,9-Tetrahydro-5H-cyclohepta[b] pyridin-5-on, Arch. Pharm. 310 (1977), 172-176	
-		ENDRES, et al., Stroke Protection By 3-Hydroxy-3-Methylglutaryl (HMG) - CoA Reductase Inhibitors Medicated By Endothelial Nitric Oxide Synthase, Proc. Natl. Acad. Sci. USA, 95 (1998) 8880-8885	
		HICKS, et al., The Synthesis And Photochemical Behaviour Of Some Annelated Tropones, J. Chem. Soc. Perkin Trans. 1, (1984) 2297-2304	
		HOFFMAN, et al., Synthesis Of 3-Nitro-5-Acylpyridines By Condensation Of Sodium Nitromalonaldehyde/Tosyl Chloride With 2-Amino-1-Acyl Olefins. Evidence For the Intermediacy of 3-Chloro-2-Nitroacrolein, J. Org. Chem. 49 (1984), 193-195	
		HUANG, et al., The Improved Preparation Of 7,8-Dihydro-Quinoline-5(6H)-One and 6,7-Dihydro-5H-1-Pyrindin-5-One, Synth. Commun. 28 (1998), 1197-1200	
		JONES, et al., Synthesis Of 4H-Cyclohepta [b] thiophen-4-ones, 4H-Cyclohepta [b] furan-4-one, and 9H-Cyclohepta[b] pyridin-9-one, J. Chem. Soc., Perkin Trans., 1, (1973), 968-972	
		KOEHLER, et al., Potential Anticancer Agents IX. Tetrahydroquinazoline Analogs Of Tetrahydrofolic Acid. I, J. Am. Chem. Soc. 80 (1958) 5779-5785	

Examiner	Date	
Signature	Considered	

<sup>1</sup> Unique citation designation number. 2 Applicant is to place a check mark here if English language Translation is attached.



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STA	TEMENT	RY	APPLICANT	First Named Inventor	STROBEL	
			/ (	Group Art Unit	1626	
	(use as many s	heet	s as necessary)	Examiner Name	Powers, F.	
Sheet	3	of	4	Attorney Docket Number	DEAV2002/0057 - US - NP	

OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS							
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.					
		LI, et al., Activation Of Protein Kinase Ca and/or e Enhances Transcription of the Human Endothelial Nitric Oxide Synthase Gene, Mol. Pharmacol. 53 (1998) 630-637					
		MACDOWELL, et al., The Use Of 2,5-Dichlorothiophene In The Synthesis Of 3,4-Disubstituted Thiophenes, J. Org. Chem. Soc. 32 (1967) 1226-1229					
		MOROI, et al., Interaction of Genetic Deficiency of Endothelial Nitric Oxide, Gender, and Pregnancy in Vascular Response to Injury in Mice, J. Clin. Invest., 101 (1998) 1225-1232					
		MURARO, et al., Heterocycles sulfures condenses Synthese et dechloration de dichloro-1,3 thieno (c) cyclenones,, Bull. Soc. Chim. Fr., Pt. 2, (1973) 335-342					
		MURARO, et al., Recherches dans le domaine des thieno (c) cyclenones. , C.R. Acad. Sci., Ser. C, 273 (1971) 1362-1367					
		NAKAYAMA, et al., T- 786 - C Mutation in the 5' -Flanking Region of the Endothelial Nitric Oxide Synthase Gene Is Associated With Coronary Spasm, Circulation 99 (1999) 2864-2870					
		NAYYAR, et al., New Approach for the General Synthesis of Oxotetrahydroindoles via Intramolecular Cycloadditions of Azomethine Ylides with Tethered Alkynes, J. Org. Chem. 62 (1997) 982-991					
		RAVINA, et al., Conformationally Constrained Butyrophenones with Mixed Dopaminergic (D2) and Serotoninergic (5-HT2A, 5-HT2C) Affinities: Synthesis, Pharmacology, 3D-QSAR, and Molecular Modeling of (Aminoalky) benzo- and - thienocycloalkanones as Putative Atypical Antipsychotics, J. Med. Chem. 42 (1999) 2774-2797					
		REIMANN, et al., Regioselektive Synthese von 4-Methyl-1-pyrindan-5-on, Pharmazie 50 (1995) 589-592					
		RUANGSIYANAND, et al., Enamine Cyclischer 1.3-Diketone als Ausgangsstoffe fur Pyridinringsynthesen, Chem. Ber. 103 (1970) 2403-2410					

Examiner	Date	
Signature	Considered	

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INFO	DRMATIC	D NC	SCLOSURE	Filing Date	07-31-2003	
STATEMENT BY APPLICANT				First Named Inventor	STROBEL	
				Group Art Unit	1626	
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Examiner nitials*	Cite No. <sup>1</sup>	item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		SCHENONE, et al., Reaction of 2-Dimethylaminomethylene-1,3-diones with Dinucleophiles. I. Synthesis of 1,5-Disubstituted 4-Acylpyrazoles, J. Heterocyclic Chem., 19 (1982) 1355-1361	
		SCHROEDER, et al., Nichtsteroidale Entzundungshemmer. 3. Substituierte Aza-Tetralin - und Aza-indancarbonsauren Mit Antiphlogistischer Wirkung, J. Med. Chem Chim. Ther. 14 (1979) 309-315	
		SESSA, et al., Chronic Exercise In Dogs Increases Coronary Vascular Nitric Oxide Production And Endothelial Cell Nitric Oxide Synthase Gene Expression, Circ. Research 74 (1994) 349-353	
		SHIGEKI, et al., 7-Oxocyclopenta[d]Pyrimidine Derivative, esp@cenet database - 12 -Document Bibliography and Abstract	
		TAKESHI, et al., Benzoic Acid Derivative Or Its Salt, esp@cenet database -12 - Document Bibliography and Abstract	_
		VARENNE, et al., Percutaneous Gene Therapy Using Recombinant Adenoviruses Encoding Human Herpes Simplex Virus Thymidine Kinase, Human PAI-1, and Human NOS3 in Balloon-Injured Porcine Coronary Arteries, Hum. Gene Ther. 11 (2000) 1329-1339	
		WESTERWELLE, et al., B-Aminoketone als Schlusselverbindungen zur Synthese von Pyridinen: Ein Neuartiger, Leistungsfahiger Zugang zu Kondensierten Bi- und Terpyridinen, Chem. Ber. 124 (1991) 571-576	
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